Release of iPhone 11 Positions UWB as 5G for IOT

UWB ALLIANCE
Collectively Creating the Future

Sharing Is The Future For Everyone

There Is An Infinite Requirement for More Capacity
…NOT Range

Self Interference Destroys Capacity

Dim Hue is Reduced Capacity from Over Lapping Cells

Blueish Hue is Reduction of Capacity from Out Of Band Emissions (OOBE)

Bright Yellows is 100% Capacity from Non-interfering Low Power Cells
With Tight OOBE

Why Is Mutual Sharing So Important at 6 GHz

- Current Licensed Users
  - Utilities: Ex: FWCC
  - NAB – Fixed Service Point to Point and Mobile (News Services)
  - Satellite Services
  - First Responders

  - NOTE: *Current Unlicensed Users Do Not Interfere!*
- Unlicensed Users
  - Ultra Wideband and Wideband (Part 15.250): 5G IOT
    - Only 6 GHz allows:
      - Indoor/outdoor use with no 10 s rule or class of service restrictions
      - Part 15.250 stops at 7.250 GHz because of Government Use Restricted Bands
    - There Will Be Disruption Of Operation Of Installed Base of Millions of Devices
    - Largest Growth of New Devices Will Be IOT
  - National Science Foundation

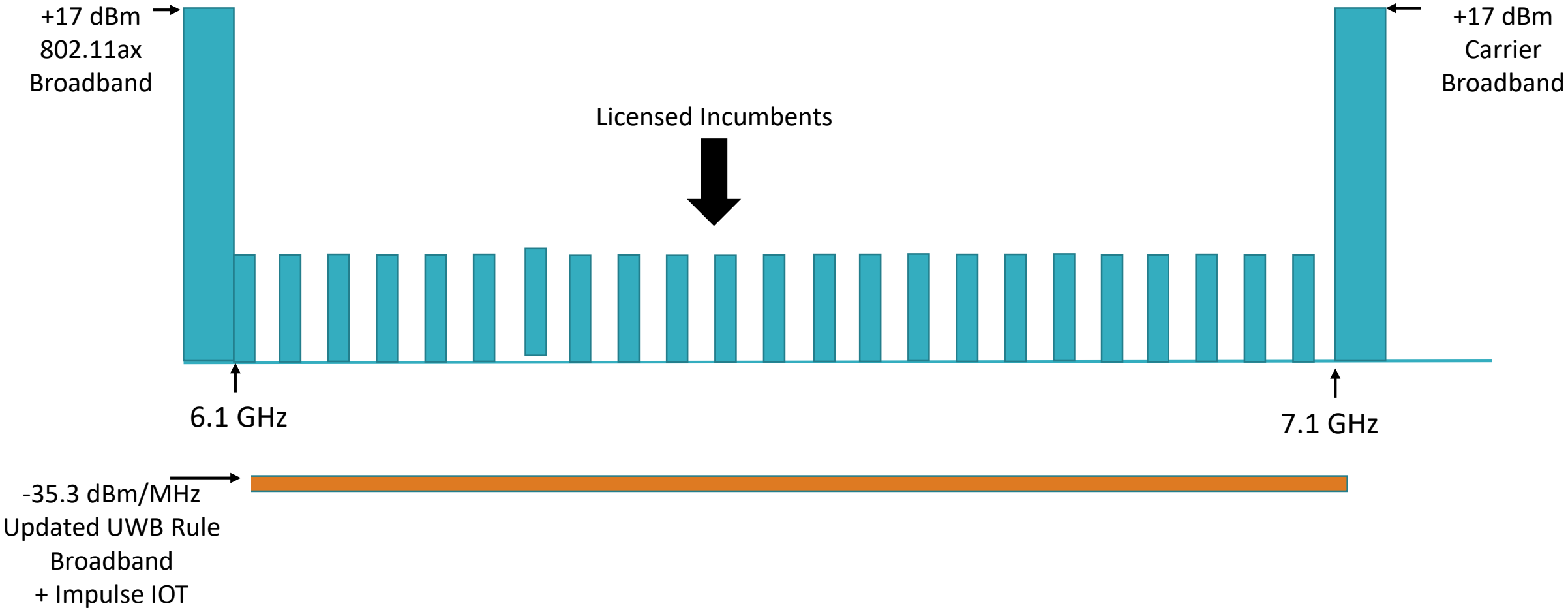
  - Could Be Broadband – 5G

  - 3GPP (Licensed Carriers) Have Just Announced an Initiative 8 GHz for 6G

Small Change to UWB Rules (Bosch Petition) would allow nearly all current users to coexist Including 6G Broadband and 5G IOT!

- Make UWB Definition more technology neutral
  - Add sweeping and other ways to meet 500 MHz requirement beyond pulse
  - Allow new modulation techniques and modified techniques to be used including 802.11 with frequency sweeping
  - Same power density as standard UWB
    - Or raise by 6 dBm
  - New Innovation***
    - Increase number of OFDM carriers to increase capacity or higher coding gain

Spectrum Sharing and Efficiency – Pico Cells are Key



Spectrum Sharing and Efficiency for 802.11ax
Pico Cells are Key